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CLAIMS

1. A spray head for use with an electrohydrodynamic spray device, wherein said spray head comprises
 - 5 at least one nozzle configured to provide a charged aerosol from a liquid formulation, said nozzle comprising a manifold having at least one fluid entrance and one or more discrete fluid spray sites; and
 - a shroud that at least partially surrounds said nozzle.
- 10 2. The spray head of claim 1, wherein said fluid spray sites are arranged in a linear array, non-linear array, or combination thereof.
3. The spray head of claim 1 further comprising a charged electrode in communication with said fluid spray sites.
- 15 4. The spray head of claim 1, wherein said manifold further comprises one or more equidistant passages in fluid communication with said fluid spray sites.
5. The spray head of claim 4, wherein fluid traveling within said manifold
 - 20 covers an equal distance from said fluid entrance to any one of said fluid spray sites.
6. The spray head of claim 4, wherein said manifold comprising equidistant passages allows for fluid spray site arrays of different geometric shapes and
 - 25 orientations, while maintaining equal flow of a liquid formulation to each discrete fluid spray site.
7. The spray head of claim 1, wherein said nozzle further comprises a spray
 - 30 shaping mechanism that defines directing electrodes positioned equidistant at opposite ends of said one or more fluid spray sites.

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8. The spray head of claim 7, wherein said directing electrodes are charged at substantially the same polarity and voltage as said fluid spray sites.

5 9. The spray head of claim 7, wherein said spray shaping mechanism defines parallel counter electrodes.

10 10. The spray head of claim 9, wherein said counter electrodes comprise thin rods that are arranged in parallel with and straddle said one or more fluid spray sites.

11. The spray head of claim 10, wherein the combination of vertical and horizontal positioning of said parallel counter electrodes in relation to said fluid spray sites effectively provides for directional spraying and variations in the shape of said charged aerosol.

12. The spray head of claim 11, wherein said directional spraying provides for efficient and targeted application of a sprayable formulation while requiring less active ingredient.

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13. The spray head of claim 1, wherein said shroud comprises a dielectric material.

14. The spray head of claim 13, wherein said dielectric material is polymeric.

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15. The spray head of claim 13, wherein said dielectric material is transparent.

16. The spray head of claim 13, wherein said dielectric material is opaque.

30 17. The spray head of claim 13, wherein said dielectric material is pigmented.

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18. The spray head of claim 1, wherein said shroud is configured to physically direct said charged aerosol towards a target.

5 19. The spray head of claim 1, wherein said shroud surrounds and extends beyond said nozzle, said shroud configured to partially shield said charged aerosol from environmental influences during application of said aerosol to a target.

10 20. The spray head of claim 19, wherein said shroud is configured to prevent said charged aerosol from effecting an area surrounding said target.

21. The spray head of claim 1 further comprising a sensor, said sensor configured to prevent said device from discharging said charged aerosol when
15 positioned in a substantially upside down orientation.

22. The spray head of claim 1, wherein said shroud comprises a plurality of dielectric tines, said tines configured to separate surrounding vegetation from a target.

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23. The spray head of claim 1 further comprising a wheel configured to translocate said device:---

24. The spray head of claim 23, wherein said wheel is configured to control the
25 distance of said nozzle from said target.

25. The spray head of claim 1, wherein said spray head is configured to rotate about one or more axes.

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26. An electrohydrodynamic sprayer system comprising

a control panel;

a power source;

a pumping mechanism;

5 a fluid container; and

a spray head comprising

at least one nozzle configured to provide a charged
aerosol from a liquid formulation, said nozzle comprising a
manifold having at least one fluid entrance and one or more
10 discrete fluid spray sites, and

a shroud that at least partially surrounds said nozzle.